Parents Guide To

SIXTH GRADE

Instruction





DEPARTMENT OF DEFENSE EDUCATION ACTIVITY



Message from the Director

Dear Parents:

The Department of Defense Education Activity (*DoDEA*) is committed to providing the highest quality of education to its students. One way to provide a quality education is with an effective curriculum that reflects high standards and expectations. Thus, DoDEA has developed rigorous content standards aligned with national guidelines and standards. But even the most rigorous standards cannot make schools and students successful without the support of parents.

This booklet is designed to inform you, our parents, of DoDEA's expectations for students in the four major curriculum areas-reading/language arts, mathematics, science, and social studies-at the sixth grade level. These expectations are aligned with the sixth grade curriculum that is used by the classroom teacher for daily instruction. The booklet also provides examples of what your child is learning in the classroom, and what he or she should know and be able to accomplish upon exiting sixth grade. In addition, it provides suggestions and tips on how you can help him or her at home.

I hope this publication is informative and assists you with understanding DoDEA's educational goals for your child in sixth grade. Working together, we can ensure his or her success and start him or her down the path to life-long learning.

Joseph D. Tafoya Director

Department of Defense Education Activity

Welcome to Sixth Grade



Sarah Simmons Printmaking, "In The Garden"

Help Your Child Find Success

Literacy is a "buzzword" in education today. By definition a literate individual is learned or educated. To address literacy, the Department of Defense Education Activity (DoDEA) has set very high standards to describe what we expect from our students at each grade level. Because information is ever changing and affects how we fuse old and new knowledge, we continually refine our instruction and how we present it to your child. Standards are aligned to our curriculum (classroom instruction) to give teachers and parents guidelines on how to monitor the academic progress of students. This booklet reflects DoDEA's standards or expectations for English/language arts, mathematics, science, and social studies for sixth grade. You may log on to the DoDEA website, www.dodea.edu, for the complete set of standards.

National studies show that the family is critical to a child's success in school. Understanding what is expected of your sixth grade student enables you, the parent(s), to assess progress. The more you know about the academic expectations for children this age, the more influence you will have in educational progress. By partnering with the Department of Defense Education Activity, you can help your child prepare to become a successful and productive citizen.

Take Time

Taking time to interact with your child at this age is just as important as when he or she was in kindergarten. If your child has entered a middle school environment, he or she may feel confused or scared by the lockers, changing classes, and longer class periods. Physical development is also greatly affecting the way children this age feel and look. Being accepted by one's peers becomes most important. Your child strives for independence but desperately needs your love and support on a daily basis.

Set Routines

In sixth grade your child will be more involved in activities outside of the school day. Homework demands will be greater and require more time at home. Your child will require enormous amounts of sleep, food, and exercise at this age. Balancing homework, extracurricular activities, family time, daily chores, and sleep may require your help. Children may not consider homework and daily chores to be a priority in life. If you help set up a daily schedule, including time for homework, your child will gain self-management and organizational skills.

A designated study time away from television and telephone will promote a good atmosphere for learning. Your child may feel more comfortable with books spread out on the floor rather than at a desk. It is important to have work supplies available and plenty of light over the work area. On days when there is no homework, have your child use the time for reading. If your child is easily distracted, use a kitchen timer to set times for work and breaks. Check homework for accuracy if your child consistently brings home poor grades. If homework is a continual struggle, talk with the classroom teacher or school counselor.

Listen to Your Child

Societal pressures on children and adolescents today are greater than ever. Your child may be exposed to drugs or alcohol, premature sex, or violence without your knowledge. Television, movies, videos, and video games may expose your child to adult activities.

Your child will probably be changeable and unpredictable during this stormy time of adolescence. He or she may seem rude and inconsiderate when interacting with others. Irresponsibility and mood changes can be annoying and infuriating. But remember, "this, too, shall pass." Your child is worth the investment of time, so take time to listen to what he or she has to say. Your child will succeed academically with your support.

Encourage Creativity

"I am not a nut. I am a pioneer." This comment by Betty Miles probably describes how your preadolescent feels. Research projects, current events, environmental issues and other causes, art and dramatic productions, the world of entertainment, sports events, and other activities will attract children at this age. Guide your child in using creativity to explore areas of interest. Creativity is not so much inventing something new as it is recombining old information. Help your child use the Internet, art, music, and writing to explore and use his or her creative mind.

Managing Time

The need to study outside of the school day increases as students advance from grade to grade. Helping your child learn time management skills is essential not only for academic success but also for success in other areas throughout life. Good time management can ensure that students take the time to process and reflect on what they've done when work is finished. The following suggestions are essential in managing time:

Organize a daily schedule-Procrastination is a common characteristic among students. They commonly put off tasks that require planning and extended work. Help your child learn to prioritize tasks and keep a record of work done.

Set goals and timelines-As study tasks become more complex and require more time to complete, students must evaluate each task and the amount of time needed to complete it. Your child may set expectations that are too high or too low, so continual monitoring is needed to determine if the quality or quantity of work accomplished is meeting reasonable expectations. Encourage your child to set realistic goals that can be met.

Break a big task into smaller tasks-If your child becomes overwhelmed with an assignment that requires an extended amount of time, show how the assignment can be broken into several short tasks with established deadlines. Remember to encourage your child to be realistic, always keeping the due date in mind. Keeping a weekly monitoring sheet will help your child visually plot assignments.

Reinforce good study habits-Help your child learn to self-monitor study habits and reward himself or herself for a job well done. Rewards might involve activities that your child would rather be doing instead of studying. A good mindset for this is "Study now and do something fun later."

Physical Activity, Nutrition, and Safety Tips

As a parent, you have an important role in shaping your children's physical activity, nutrition, and safety attitudes and behaviors. Help keep them safe, healthy, and ready to learn. Here are some things you can do.

Limit the time your children watch television or play video games to no more than two hours per day. It is recommended that children participate in at least 60 minutes of moderate-intensity physical activity most days of the week.

Plan your children's snack choices. Keep an eye on the calorie content and serving size of the beverages your children are drinking. A 100-calorie-per-serving drink in a bottle with 2.5 servings provides 250 calories if fully consumed.

Create a safe home and community environment. Model safe practices by referring to the UV index when planning outdoor events. The UV Index is a daily forecast of the intensity of the sun's UV rays. It indicates the risk of overexposure to skin-damaging UV radiation and can be used to help plan activities to minimize overexposure.

Reading

Students are expected to read a lot, both at home and at school.

Students will read from a diverse collection of reading materials at the sixth grade level, including traditional and contemporary literature (both fiction and nonfiction), magazines, newspapers, textbooks, and online material. Students should select literature from a variety of authors or areas of interest, reading at least five different authors during the school year.

As you support your child's efforts, encourage your child to do the following:

- Keep a reading journal either in a notebook or on a computer to record books read, along with summaries, opinions, or recommendations. (E.g., if your child is interested in a specific topic like flying airplanes, encourage him or her to bring home books on the subject.)
- Participate in book discussions, both informal and formal. (E.g., find a book series such as The Trilogy to read with your child. Discuss how the author hooked readers into reading the entire series.)
- Make relevant, logical, and coherent contributions to a discussion or debate on literature. (E.g., establish a family time when each family member discusses something they have read during the week.)

Students read and produce evidence of understanding what they have read.

Students will make a responsible interpretation of what they have read by making a connection between parts of a story or book read, among several stories or books, and between stories or books and their real-life experiences. Students will evaluate reading texts and apply information gained.

- Make and support responsible statements about a book he or she has read. (E.g., read a folktale together and discuss how the story teaches a lesson. Be sure your child uses information from the story to support statements.)
- Support statements with convincing evidence and viewpoints.
 (E.g., after your child reads a Greek myth, ask him or her to discuss how the ancient Greeks felt about a particular subject area such as nature or art.)

- Compare and contrast the themes, characters, and ideas in books. (E.g., have your child develop a comparison chart to tell how the themes, characters, and ideas in two stories or books are similar or different.)
- Make well-developed connections. (E.g., have your child discuss how the main character(s) in a story solved a problem. What process did the character(s) go through to solve the problem?)
- Explain the author's writing strategies. (E.g., after you both read the same book or story, discuss what words and phrases demonstrate the author's tone or attitude. How did these affect what the author had to say?)

Students read informational materials for understanding and expertise.

Students will read material to gain information and share it with others, either orally or in written format.

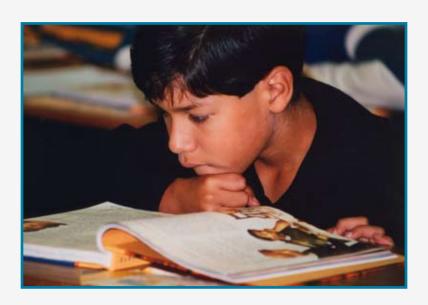
- Restate or summarize information read (present the information in his or her own words to an audience).
- Relate new information to prior knowledge and experience to build an understanding. (E.g., before reading a book or story, have your child write down what he or she wants to know and already knows about the subject area covered in the reading text. Ask your child how he or she would go about finding the answers to these questions through reading. Help your child organize, analyze, and summarize the information read to explain findings.) Extend ideas gained from books read to other areas. (E.g., taking an idea from readings, have your child create a project for social studies or science.)
- Connect new knowledge to related topics of information. (E.g., encourage your child to organize key information by using a graphic format.)



Students read familiar material aloud, recognizing most of the words and in a way that makes meaning clear to listeners.

Students will independently read material fluently. Students will use skills to correct reading errors or determine pronunciation of new words.

- Self-correct errors during reading.
- Use a variety of systems to help decode words and determine pronunciation and meanings. (E.g., if your child uses phonics in decoding, ask him or her if the word sounds right. If your child uses context clues to decode a word, ask if the word makes sense given the rest of the sentence or paragraph.)
- Read with a rhythm and flow that suggests everyday speech.
- Read across texts (integrate information from all subject areas) to solve problems, make decisions, understand a concept, or draw conclusions.



Writing

Students develop a written report.

Students will produce a report that is informative to a specific purpose and audience. They will present their interpretation of literature in a written format that includes multiple drafts that have gone through the informal feedback and editing process.

- Create a context or theme to interest the reader.
- Develop a viewpoint on the subject covered.
- Create an organized format. (E.g., encourage your child to use the following steps to revise written work: provide an interesting introduction, organize the important steps in a logical order, and define or explain any unfamiliar terms.)
- Include appropriate facts and details.
- Exclude inappropriate material in the reporting of information.
- Analyze and interpret material read and include it in the written report, such as comparing and contrasting cultural characteristics in two different civilizations.
- Support interpretations by referencing the text, other works, and personal experiences.
- Provide a sense of closure in the report.
- Produce a report in other subject areas such as science, social studies, or mathematics.

Students produce a narrative account or narrative procedure.

Students will develop, in writing, an account of a personal or imaginative story, a set of rules, a set of procedures, or game instructions.

As you support your child's efforts, encourage your child to do the following:

- Create an organized structure that engages the reader's interest. (E.g., when writing a biography, a historical account, or a news account of an event, help your child outline his or her thoughts. Discuss how to present the information in a way that will interest the reader.)
- Include concrete details to develop the account. (E.g., discuss what should be included in an article on a current event.)
- Exclude any information that is not needed. (E.g., discuss what information is not needed when writing a personal narrative.)
- Use a range of strategies in reporting and writing (e.g., using facts and details, analyzing the subject, comparing and contrasting, explaining benefits or limitations, and providing a plot to illustrate).
- Support arguments if presented. (E.g., when explaining the rules for a sport, give reasons why a particular rule is important.)

Speaking, Listening, and Viewing

Students use the fundamental processes of speaking, listening, and viewing to express, explore, and learn about ideas.

Students will gather and share information, persuade others, express and understand ideas, coordinate activities with others, and analyze messages.

- Respond to questions with appropriate elaboration.
- Rephrase an adult's directions or instructions.
- Display appropriate behavior when taking turns.
- Solicit others' opinions and comments.
- Clarify, illustrate, and expand on a topic when asked to do so.
- Carry out problem-solving strategies.

Students deliver an individual presentation.

Students will develop presentation skills that include the preparation and presentation of information to a designated audience.

As you support your child's efforts, encourage your child to do the following:

- Prepare a presentation that would interest others. (E.g., when preparing a presentation for school, help your child select and organize information to entice the audience.)
- Use notes or other memory aids to structure the presentation (e.g., overhead projector images, charts, PowerPoint slides, or index cards).
- Develop several main points relating to a single theme. (Graphics or other visual aids can help your child to summarize and emphasize the main points in a presentation.)
- Use appropriate verbal cues and eye contact.
- Project a sense of individuality and personality in the selection and delivery of the presentation.

Grammar and Usage of the English Language

Students demonstrate a basic understanding of the English language in their writing and speaking.

Students will select and use language that is appropriate to the purpose, audience, and context of the work. Students will analyze written work to ensure that it relays the intended message or thought.

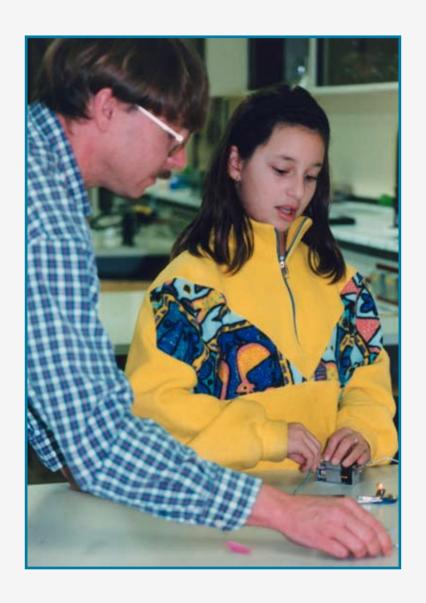
- Use appropriate grammar and sentence structure in oral communication, and appropriate grammar, sentence structure, paragraph structure, punctuation, and spelling in written communication. (E.g., encourage your child to use proper English in conversations and writings.)
- Revise written or oral communication by adding or deleting detail or explanations; clarifying difficult passages; rearranging words, sentences, and paragraphs to improve meaning; and sharpening the focus. (E.g., encourage your child to increase vocabulary by learning at least one new word a day. A helpful website that identifies power vocabulary words and reading selections at various grade levels is http://www. lexile.com/.)

Literature

Students study literature.

Students will respond to nonfiction, fiction, poetry, and drama using interpretive, critical, and evaluative processes. Students will produce at least one piece of literature.

- Identify recurring themes across the literature. (E.g., encourage your child to find folktales with common themes and read them at home.)
- Analyze the impact of the author's word choice and content on the reader.
- Evaluate literary merit of the stories and books read. [A chart or a Venn diagram (circles that overlap, with shared characteristics written in the overlapping area) will help your child compare the different elements of several books read.]
- Consider the purpose of the author's point of view. (E.g., after reading several newspaper articles about a current event, discuss the message the writer wanted readers to receive.)
- Examine the reasons for a character's actions. (E.g., after reading a folktale or Greek myth, discuss how the author explains the main character's actions with supporting information.)
- Compare a weakly developed character to a fully developed character. (E.g., compare characters in a favorite story and describe how they were developed or portrayed.)
- Critique a plot as to whether it is realistic. (E.g., discuss a physical challenge a character faced in a story and whether the solutions were realistic.)
- Make judgments and draw conclusions about contexts, events, characters, and settings.
- Write a poem, short play, picture book, or story.



Mathematics

Numbers and Operations

Students select and use a combination of appropriate arithmetic operations to solve problems that use rational numbers.

Students apply and explain number theory concepts to solve problems.

As you support your child's efforts, encourage your child to do the following:

- Go on a shopping trip for clothes. Looking at pants and shirts or skirts and blouses, decide how many different outfits you would have by mixing and matching the items.
- Participate in planning a family trip. Assuming you start with a full tank of gas, use a map and decide where you will need to stop and get gas for the car if the gas tank holds 18 gallons of gas and gets 25 miles to the gallon.
- Solve a multistep problem. (E.g., a video store charges \$3.50 for new movies and \$2.50 for children's movies. If a family rents four new movies and three of them are children's movies, how much will the family have to pay?)
- Use computers and calculators to solve mathematical problems.
 (E.g., have your child complete math homework using paper and pencil first.
 Then encourage your child to check answers using a computer or calculator.)

Algebra

Students should represent, analyze, and generalize patterns and relations with tables, graphs, and words.

Students use math to solve everyday problems.

- Keep a ledger recording the money received for weekly allowance and how he or she spends it.
- Read The Phantom Tollbooth. Chapter 14 has directions to an imaginary place named Digitopolis. These directions are given in miles, rods, yards, feet, inches, and half inches. Have your child figure which is the shorter or quicker way to get to Digitopolis.

Mathematics

Geometry

Students predict, describe, and perform transformations on two-dimensional shapes.

Students identify relationships among points, lines, and planes.

- Use sample tiles or paper to design a kitchen floor or a quilt.
- Cut old greeting cards into squares, rectangles, and triangles. Tape the edges together to create boxes and pyramids.



Eryn Duston Tempera, "Rainbow Wolves"

Mathematics

Measurement

Students explain the relationships between perimeter and area, and between circumference and area of a circle.

Students use formulas to find perimeter, circumference, and area.

Students identify rate as a form of measurement.

As you support your child's efforts, encourage your child to do the following:

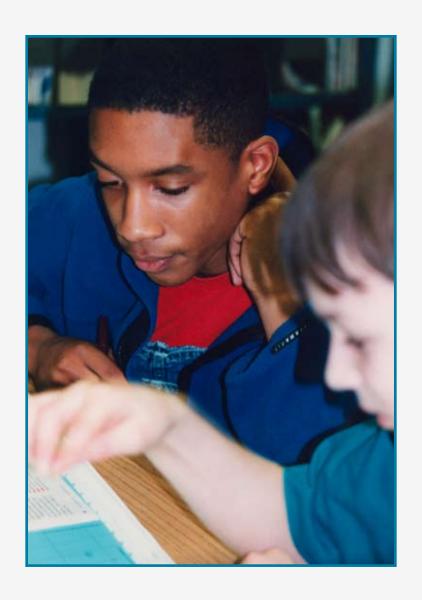
- Help in planning a multiple-day trip. Decide how many miles you
 will drive each day. Determine the number of stops that will be
 made. Using the amount of time and the number of miles you
 will be driving, have your child use a map and determine the
 appropriate place to stop each evening.
- Keep track of his or her pulse rate when exercising. Show your child how to find a pulse on the wrist or on the neck under the chin. Count the beats per minute, or count the beats for 10 seconds and multiply by 6. Figure out the difference between the rate immediately after stopping exercise and after resting for a while.

Data Analysis and Probability

Students select, create, interpret, and justify the appropriate graphical representation of data.

Students understand and apply the fundamental concepts of probability.

- Make recommendations based on analysis of data. (E.g., based on data collected, ask your child to identify and recommend the best place to go for pizza, based on popularity, taste, cost, distance, and other factors.)
- Tell about different graphs and charts found in the local newspaper or magazines. Discuss how the images help tell part of the story.



Inquiry Skills

Students plan and conduct scientific investigations using inquiry skills.

Students will collect and analyze data, and verify experimental results. They will define the variables in the experiment and make simple predictions using picture, bar, and line graphs. They will use scientific words to describe and report observations and experiments.

- Identify questions that he or she can answer through scientific investigations. (E.g., help your child develop the attitude that taking a scientific approach is like being a detective in a mystery story. Upon finding a dead or dying plant, have your child guess what is happening to the plant. Encourage the use of scientific tools and the inquiry process to support or reject quesses.)
- Use appropriate tools, technology, and techniques to gather, analyze, and interpret data. (E.g., encourage the use of the inquiry method in discovering and investigating areas of interest. The steps in the inquiry method are:
 - (1) determine what you want to know and what you already know about the subject
 - (2) get information that already exists about the area of investigation
 - (3) design a safe investigation to find the answer to the question
 - (4) conduct the investigation or collect the information or data
 - (5) organize, analyze, and summarize the findings or information
 - (6) redesign the investigation as appropriate to better answer the guestion.)
- Organize and maintain a journal showing the procedures and results of an investigation.
- Develop descriptions, explanations, predictions, and models about the investigation using scientific evidence.
- Use mathematics when conducting scientific inquiry.
- Make logical relationships between the evidence and his or her explanations. (E.g., together examine a tree stump and count the dark rings to estimate the tree's age. Discuss whether the tree's growth was the same every year, and if not, what could have caused the differences. As your child conducts daily investigations, help him or her make logical connections between the information or data collected and his or her explanations.)

- Demonstrate effective ways to organize and display scientific data. (E.g., have your child use graphic organizers and/or graphs to illustrate findings.)
- Communicate accurately and clearly about science concepts using scientific words.

Physical Science

Students apply the principles of motion and forces.

Students will explore the study of transformations of energy, matter, forces, electricity, and magnetism.

- Design and complete investigations to calculate the speed (rate of travel) of moving objects. (E.g., cut a plastic soda straw to a length of about 4 inches, and thread a string, about 1 yard long, through it. Tie a pencil eraser to each end of the string. Hold the straw upright and move it around in a circular motion so the top weight swings around and around. Change the speed of the rotation, faster and slower, and observe the lower weight. What happens to the lower weight as you increase and decrease the speed of rotation?)
- Explain the relationship between speed and location of moving objects.
- Demonstrate how objects have potential and/or kinetic energy. (E.g., a basketball in your child's outstretched hand has potential energy. When your child lets go of the basketball, the potential energy becomes kinetic energy. Help your child come up with other examples that demonstrate understanding of the concepts.)
- Describe how electrical energy is transferred to produce heat, light, sound, and mechanical or chemical energy. (E.g., have your child use a flashlight to demonstrate how chemical energy is converted into electrical energy. Suggest that your child share the information with a younger sibling or friend.)

Life Science

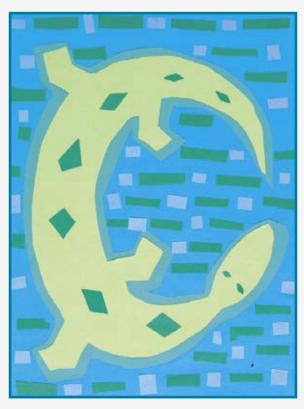
Students analyze the relationship between structure and function of living things, explain reproduction and heredity, explain how populations relate to ecosystems, and describe the diversity and adaptations of organisms within an ecosystem.

Students will contrast and compare the relationship among living things through their study of the animal and plant kingdoms.

- Compare the cellular, tissue, organ, and system levels of organization of animals and plants. (E.g., together watch the movie Inner Space. Afterward, have your child tell you how the different body systems demonstrated in the movie are alike or different, and how they work together as a system.)
- Explain the structures and functions of the circulatory and respiratory systems.
- Compare traits that are inherited with traits that are learned.
 (E.g., have your child develop a chart that lists the traits your child thinks he or she has inherited and the traits your child thinks he or she has learned. Then have your child compare his or her traits to those of other family members.)
- Describe ways that different species respond to each other within the same ecosystem. (E.g., take a family outing to a pond. When you return home, talk about how all the organisms interact with each other in the pond setting. Have your child develop an illustration that displays the food web from that community. Discuss the connection between the number of items in the food chain and the effect on the chain if one species eats several other species in the chain.)
- Compare organisms that perform the same function in different ecosystems.
- Explain different theories on the extinction of organisms. (E.g.,
 if your child is interested in the topic, he or she can research theories on why
 dinosaurs became extinct on the following website: http://www.dinosaur.
 org/saurofindo.html.)
- Describe how environmental changes may cause endangerment and extinction. (E.g., have your child explore how pollution from trash such as Styrofoam cups, plastic rings from six-packs of beverages, and toxic substances affect the population of marine life. Your child may want to go to the library or conduct research on the Internet to find information about

an endangered species such as the sea turtle. He or she could use the new knowledge to organize a beach cleanup if your family lives near a beach or water, or write a letter to a state or government representative on ways to enforce laws on garbage pollution.)

- Explain how the adaptive characteristics of species have an impact on their chance for survival or possible extinction. (E.g., the monarch butterfly and the viceroy butterfly are very similar in the color and pattern of their wings. Because birds dislike the taste of monarch butterflies, they stay away from viceroy butterflies as well as monarchs because of the similarity in coloration.)
- Investigate modern-day efforts to prevent the extinction of plants and animals. (The National Wildlife Federation website has projects and activities designed to help students learn about wildlife, the environment, and conservation. It also provides suggestions on what students can do to make a difference in their environment. Activities change monthly. Visit http:// www.nwf.org/earthsavers/)



Nick Hilgartner Paper, "Gecko"

Earth and Space Science

Students learn about the structure of Earth and its position in the solar system.

Students will continue their study of how air, weather, and climate are related.

- Tell the difference between weather and climate. [E.g., together with your child, explore the many interesting facts and games provided on the National Aeronautics and Science Administration (NASA) website on earth science: http://kids.earth.nasa.gov/.]
- Explain the importance of the oceans in forming weather patterns, and the oceans' effect on the world's climate. (E.g., have your child explain how the water cycle affects the weather. A current example of a factor that affects the weather and sensitive ecosystems on Earth is El Niño. Read about it on the following NASA website: http://kids.earth.nasa. gov/archive/nino/intro.html.)
- Demonstrate the relationships of the earth to the sun and the moon.
- Explain how the angle of the sun's rays is responsible for temperature changes during the seasons.
- Describe objects that enter the solar system from outside the system. (E.g., take a family outing to a local planetarium, or explore comets, meteorites, and micrometeorites on NASA's website: http://kids.msfc.nasa. gov/news/2002/news-mystery.asp/. The site has great photos, explanations, and activities designed for students.)
- Explain solar and lunar eclipses.

Science and Technology

Students learn how science and technology are dependent on each other.

Students will use technology to create a technological design. They will explore the benefits and consequences of technology within their environment.

- Identify products or examples of technology that are commonly used.
- Describe how technology is constantly changing (e.g., computers, medical equipment, and automobiles).
- Compare the intended benefits and the unintended consequences of technology. (E.g., discuss how space technology has been used for tracking icebergs, developing cancer treatments, fighting terrorism and crime, communicating with others around the world, and exploring space. Together, research one example to see if it produced any unintended consequences for humans.)



Science in Personal and Social Perspectives

Students learn to practice safety in science and to evaluate the risks and benefits of science.

Students will practice safety in science activities; will understand the interrelationships of populations, resources, and environments; and will examine risks and benefits of personal and social decisions.

- Use precautions when using electrical appliances at home and at school.
- Describe safety precautions needed during natural hazards (e.g., how to go to a safe room in a house during a tornado, what location in the house is the safest in the event of a natural disaster, and what one should do in the event of an earthquake).
- Evaluate the risks, costs, and benefits of human decisions related to natural hazards (e.g., the costs and benefits of construction practices such as securing shelves and water heaters to nearby walls, engineering roads and bridges to withstand earthquakes, using fire-retardant materials in new construction to lessen the impact of a disaster).
- Describe and investigate how student actions impact on world environmental concerns. (E.g., help your child identify an environmental cause and research a way he or she can effect change. One example is the Living Planet Pledge from the World Wildlife Federation, available at that organization's website: http://www.worldwildlife.org/default.cfm?sectionid=2 01&newspaperid=11.)



<u>Science</u>

History and Nature of Science

Students understand that science is a human endeavor, understand the cooperation between scientists, and describe events in the history of science.

Students will explore the history of science and how scientists through time have used new evidence to make changes to theories and accepted ideas.

- Identify the contributions of individuals from other cultures to knowledge in science, technology, and engineering. (E.g., read about a scientist's life and contributions on the website Today in Science: http://todayinsci.tripod.com/. Each day the site features scientists who were born on that day of the year.)
- Recognize and identify types of educational choices required for science and technology careers.
- Describe how scientists who worked in teams solved a problem or made a scientific discovery. (E.g., together watch a movie such as Apollo 16 and discuss how the team worked together on their mission.)
- Tell how scientists communicate the results of their work.
- Describe and name scientists whose discoveries were ahead of their day. (E.g., read about the life of Jules Verne - a helpful website is http://vesuvius.jsc.nasa.gov/er/seh/bioverne.htm - to learn how, through his studies and writings, he predicted inventions long before they were developed. Together, read one of his books, such as Twenty Thousand Leagues Under the Sea which describes a submarine long before the first plan for a submarine had been drawn.)
- Describe the scientific contributions of ancient societies. (E.g., find an archaeological site near your home to visit, or go online to a website where you can learn how an ancient society has contributed to the study of astronomy. See, e.g., http://www.sacredsites.com/explore.html or http://www. christiaan.com/stonehenge/info/links.)

Citizenship

Students study ideals, principles, and practices of citizenship in a democratic republic.

Students will examine the roles and influences of individuals in the political systems of the world and how public policy is shaped.

As you support your child's efforts, encourage your child to do the following:

- Analyze how public policy is changed. (E.g., discuss upcoming local, state, or national elections. Give particular attention to the ways individuals influence the development of public policy. Ask examples of ways in which your child or groups to which he or she belongs can influence public policy.)
- Identify roles and responsibilities of citizens throughout history. (E.g., watch a movie such as Ben Hur, Glory, Separate but Equal, or The Odyssey, and discuss how the people and the event portrayed in the movie had an impact on history or society. Go to the library with your child and find a book on the subject.)
- Determine how opinion influences the shaping of public policy and decision making. (E.g., have your child choose a personal interest such as music, sports, or animal rights and conduct research to see if any interest group or lobbying group is organized to represent that interest. Explore the impact that this group has had on public policy.)
- Participate in activities with a variety of persons from diverse backgrounds.

Culture

Students study culture and cultural diversity.

Students will identify the many elements that make up a culture through their study of ancient civilizations and cultures.

As you support your child's efforts, encourage your child to do the following:

 Identify the cultural contributions of individuals, groups, and societies. (E.g., together, explore a cultural contribution in the area of art, clothing, or music. You may want to visit a heritage exhibit, celebration, or concert.)

- Explore how information and experiences may be interpreted by people from diverse cultural perspectives. (E.g., discuss a current event that has international consequences and explore how several diverse cultures interpret or explain the event. A current example is the difference of perception on terrorism between some people in Western countries and some people in Islamic countries based on the events of September 11, 2001.)
- Explain the relationship between culture and religion.
- Think of alternatives for dealing with social tensions and issues within and across cultures. (E.g., discuss how your child would feel if he or she were the only American student in a school where none of the other students liked him or her simply because of cultural differences. Have your child tell you how the treatment would make him or her feel, and what options would be available to develop a better relationship with fellow students.)

Time, Continuity, and Change

Students study the way human beings view themselves in and over time.

Students will explore the history of ancient civilizations to understand patterns and connections with current civilizations.

- Use historical information to analyze how human beings view themselves across eras. (E.g., plan a trip to a local museum to observe items from the past. Talk about the differences between these items and their modern counterparts and how the advances have affected everyday life.)
- Compare and contrast the effects of inventions and ideas across civilizations. (E.g., have your child select a modern invention. On one day, have the entire family pretend they are living in an era before this item was invented. Talk about how the absence of this invention would personally affect each family member.)
- Analyze connections and patterns of historical change through the use of timelines.
- Analyze a social change resulting from a social conflict.
- Analyze the historical development of a current event.

Space and Place

Students study space and place.

Students will use a variety of tools to investigate the past and tell its story. They will explore how geography shapes people's lives and is shaped in turn by people's activities.

As you support your child's efforts, encourage your child to do the following:

- Apply the five themes of geography (location, place, humanenvironment interactions, movement, and region) to the civilizations studied.
- Describe how geographic factors have influenced historical events, patterns of change, and daily life. (E.g., have your child choose a time and place in which geography influenced the development and settlement of that area. Have your child create a story about a particular time period using historical and geographical facts. Invite him or her to tell the story at a family gathering.)

Individual Development and Identity

Students study individual development and identity.

Students will describe how regional, ethnic, and cultural influences are a part of one's identity.

- Identify how controls and changes imposed by society influence his or her personal growth.
- Describe how regional, ethnic, and national cultures have influenced his or her individual development. (E.g., have your child explain ways in which language, stories, folktales, music, and media have contributed to the expression of his or her culture.)
- Describe the conflict between his or her personal values and society's values.

Individuals, Groups, and Institutions

Students study the interaction among individuals, groups, and institutions.

Students will study how interactions among cultures modify those cultures.

As you support your child's efforts, encourage your child to do the following:

- Analyze the changing role of the family throughout history.
- Explain how status and social class affect the interactions of individuals and social groups.
- Identify major groups and institutions that have played important roles in the development of civilizations.

Production, Distribution, and Consumption

Students study how people organize for the production, distribution, and consumption of goods and services.

Students will examine the changes in ancient and medieval civilizations that resulted from the growth of trade. Students will develop an understanding that trade encourages an exchange of both goods and ideas.

- Discuss the effect of trade on the development of a civilization (e.g., trade provides communities with more and better goods).
- Discuss the impact of economic, technological, and social changes on work.
- Analyze the development of economic systems over time.

Power, Authority, and Governance

Students study how people create and change structures of power and authority.

Students will examine and compare the political, economic, religious, and social structures of ancient and medieval civilizations to understand how, over time, governments can change from one form to another.

- Explain how historical events have influenced individuals' participation in government.
- Analyze the qualities needed for successful leadership. (E.g., explore several past world leaders such as Winston Churchill, Nelson Mandela, and Mohandas Gandhi and discuss what leadership qualities they have in common and how they influenced the history of the world.)
- Analyze the political, economic, religious, and social issues of the world's civilizations. (E.g., when watching the world news, discuss with your child some of the political, religious, economic, or social issues of the country that are being discussed.)
- Trace the historical development of political institutions. (E.g., together read a book about a collapse of a nation and the emergence of the new political institution that followed it. Two books for young people about the changes in Eastern Europe are Revolution in Eastern Europe by Peter Cipkowski and The New Eastern Europe by Michael Kronenwetter.)
- Trace the historical development of democratic ideals. (E.g., help your child understand how cause-and-effect relationships explain change. Choose an example of a historical revolution such as the French Revolution, and explore how the revolutionaries fought for freedom. What was the outcome of their fight?)



Science, Technology, and Society

Students study the relationships among science, technology, and society.

Students will develop an understanding of the effects technology has had on ancient and medieval civilizations. Students will explore how technology is not only part of our history, but also part of our lives today.

As you support your child's efforts, encourage your child to do the following:

- Describe the changes and issues that have occurred in societies as a result of technological and scientific change. (E.g., communication is quickly disseminated worldwide, allowing for governments and agencies to effectively respond to worldwide issues.)
- Describe how science and technology have changed perceptions in the world.
- Evaluate the success of civilizations' uses of technology as it relates to their place in time. (E.g., during the Ice Age, many humans became skilled metalworkers who shaped copper into tools for hunting.)

Global Connections

Students study global connections and interdependence.

Students will explore how civilizations are interconnected through cultural elements and technology.

- Describe how cultural elements such as language, art, music, and belief systems can both connect people and cause misunderstandings such as cultural conflicts between nations.
- Demonstrate an understanding of how concerns, standards, issues, and human rights are viewed differently in various societies.
- Describe the effects of technology on the global community. (E.g., scientific advances in medicine enable people to live longer, healthier lives; computer technology and the Internet help people find out what is happening around the world right now; and satellites relay updated information about the weather.)

Notes

Appendix

Recommended Reading Books

Fiction

- Alexander, Lloyd. Remarkable Journey of Prince Jen. London: Puffin Books, 2004.
- Ayres, Katherine. Macaroni Boy. New York: Delacorte, 2003.
- Balliett, Blue. Chasing Vermeer. New York: Scholastic, 2005.
- Collins, Suzanne. Gregor the Overlander. New York: Scholastic, 2004.
- Cowell, Cressida. How to Train Your Dragon. New York: Little, Brown, 2004.
- Cromer Byars, Betsy. The SOS File. New York: Henry Holt & Co., 2004.
- Edwards, Wallace. Monkey Business. Tonawanda, NY: Kids Can Press, 2004.
- Finney, Patricia. I, Jack. New York: HarperCollins, 2004.
- Hannigan, Katherine. Ida B:... and Her Plans to Maximize Fun, Avoid Disaster, and (Possibly) Save the World. New York: HarperCollins, 2004.
- Horvath, Polly. The Pepins and Their Problems. New York: Farrar, Straus & Giroux, 2004.
- Karr, Kathleen. Exiled: Memoirs of a Camel. Tarrytown, NY: Marshall Cavendish, 2005.
- Lawlor, Laurie. The School at Crooked Creek. New York: Holiday House, 2004.
- Munoz Ryan, Pam. Becoming Naomi Leon. New York: Scholastic, 2004.
- Paterson, Katherine. Jacob Have I Loved. New York: HarperCollins, 1990.
- Polacco, Patricia. Thank You, Mr. Falker. New York: Scholastic, 1998.
- Rowling, J. K. Harry Potter and the Half-Blood Prince. Scholastic, 2005.
- Scieszka, Jon. Science Verse. New York: Penguin Group, 2004.
- Soto, Gary. Pacific Crossing. New York: Harcourt Brace, 1992.
- Wilson, Johnneice. Oh, Brother. New York: Scholastic, 1998.

Nonfiction

 Bennett Hopkins, Lee. Wonderful Words: Poems About Reading, Writing, Speaking, and Listening. New York: Simon & Schuster, 2004.

- Gibbs Davis, Katherine. Wackiest White House Pets. New York: Scholastic, 2004.
- Hesse, Karen. Cats in Krasinski Square. New York: Scholastic, 2004.
- Montgomery, Sy. The Tarantula Scientist. Boston: Houghton Mifflin Co., 2004.
- Myers, Walter Dean. The Greatest: Muhammad Ali. New York: Scholastic, 2001.
- Smith, Charles R. Diamond Life: Baseball Sights, Sounds and Swings. New York: Scholastic, 2004.

Recommended Reading Websites

- Houghton Mifflin Education Place http://www.eduplace.com/
 Resources for elementary school teachers, students, and parents; includes educational games and textbook support.
- Kid Source OnLine http://www.kidsource.com/kidsource/content/learread.html —Article on helping your child with reading.
- Kid Source OnLine http://www.kidsource.com/kidsource/content3/
 RWNactivities/index.html Activities for reading and writing fun.
- Magic School Bus http://www.scholastic.com/magicschoolbus/home.htm Activities for children.
- Talespin www.pitara.com/talespin/folktales.asp Children's folktales and stories.
- United States Department of Education http://www.udel.edu/ETL/RWN/Encourage.html Reading and writing activities.
- University of Florida http://web.uflib.ufl.edu/cm/africana/children.htm
 African children's literature.

Recommended Mathematics Books

- Condon, Daniel. Playing The Market: Stocks And Bonds. Chicago, IL: Heinemann Library, 2003.
- Dispezio, Michael A. Map Mania: Discovering Where You Are & Getting to Where You Aren't. New York: Sterling Publishing, 2002.
- Edmiston, Margaret C. Wizard's Book Of Puzzles. New York: Sterling Publishing, 2002.
- Giesecke, Ernestine. Be Your Own Boss: Small Businesses. Chicago, IL: Heinemann Library, 2003.

- Giesecke, Ernestine. *Dollars And Sense: Managing Your Money.* Chicago, IL: Heinemann Library, 2003.
- Giesecke, Ernestine. Everyday Banking: Consumer Banking. Chicago, IL: Heinemann Library, 2003.
- Giesecke, Ernestine. From Seashells To Smart Cards: Money And Currency. Chicago, IL: Heinemann Library, 2003.
- Giesecke, Ernestine. Money Business: Banks And Banking. Chicago, IL: Heinemann Library, 2003.
- Giesecke, Ernestine. Your Money At Work: Taxes. Chicago, IL: Heinemann Library, 2003.
- Griffin, Adele. Hannah, Divided. New York: Hyperion Press, 2004.
- Juster, Norton. Phantom Tollbooth. New York: Random House, 2005.
- Karlitz, Gail. Growing Money: a Complete (and Completely Updated!) Investing Guide for Kids. New York: Penguin Group, 2005.
- Latham, Jean Lee. Carry On, Mr. Bowditch. Boston: Houghton Mifflin Co., 2003.
- Long, Lynette. Great Graphs and Sensational Statistics: Games and Activities That Make Math Easy and Fun. Indianapolis: John Wiley & Sons, 2004.
- Nissenberg, Sandra K. Everything Kids' Cookbook: From Mac' N Cheese to Double Chocolate Chip Cookies—All You Need to Have Some Finger Lickin' Fun. Cincinnati: Adams Media, 2002.
- Smith, Kurt. Logic Puzzles To Bend Your Brain. New York: Sterling Publishing, 2001.
- Wise, Bill. Whodunit Math Puzzles. New York: Sterling Publishing, 2001.
- Wolk-Stanley, Jessica. Dr. Math Gets You Ready For Algebra: Learning Pre-Algebra I. Indianapolis: John Wiley & Sons, 2003.
- Zaslavsky, Claudia. More Math Games & Activities From Around The World. Chicago, IL: Chicago Review Press, 2003.
- Zeman, Anne. Everything You Need To Know About Math Homework. New York: Scholastic, 2005.

Recommended Mathematics Websites

- Education by Design Kids Activities http://www.edbydesign.com/kidsact.html Online activities for kids, including a Pokemon scrambler, math games, and a place to publish stories, jokes, and poems.
- Everyday Mathematics http://www.everydaymath.com Games and activities to build math knowledge.
- Kids Math Syvum Book http://www.syvum.com/math/arithmetic/level1.html Arithmetic problems and math exercises for kids.
- Math Cats Magic Chalkboard http://www.mathcats.com/ Math art gallery and lots of interactive math activities, including magic squares, conversions, seasonal surveys, symmetry, tessellations, geometric designs, and games.
- Math Is Fun http://www.mathisfun.com/ Math games and activities you can play with your child to help in understanding numbers and math concepts.
- Quia Mathematics Activities http://quia.com/dir/math Activities to practice addition, subtraction, multiplication, division, and rounding.
- Teach R Kids Math http://www.teachrkids.com/ Math for elementary school kids.
- United States Department of Education http://www.ed.gov/parents/academic/help/math/index.html Fun activities to strengthen math skills and build a positive attitude toward math.

Recommended Science Books

- Arnold, Caroline. El Nino: Stormy Weather for People and Wildlife. Boston: Houghton Mifflin Co., 2005.
- Cerullo, Mary M. Life Under Ice. Gardiner, ME: Tilbury House Publishers, 2005.
- Datnow, Claire L. Edwin Hubble: Discoverer of Galaxies. Berkeley Heights, NJ: Enslow Publishing, 2001.
- Driscoll, Dan. Inventor's Times: Real-Life Stories of 30 Amazing Creations.
 New York: Scholastic, 2002.
- Editors of Yes Magazine. Fantastic Feats and Failures. Tonawanda, NY: Kids Can Press, 2004.

- Evert, Laura. Rocks, Fossils and Arrowheads. Minneapolis, MN: Northword Books, 2002.
- Garrison, David. Amazing International Space Station. Tonawanda, NY: Kids Can Press, 2003.
- Green, Jen. Coral Reef. New York: Crabtree Publishing, 2002.
- Halls, Kelly Milner. Albino Animals. Plain City, OH: Darby Creek Publishers, 2004.
- Hickman, Pamela. Animals and Their Mates: How Animals Attract, Fight for, and Protect Each Other. Tonawanda, NY: Kids Can Press, 2004.
- Kramer, Stephen. Hidden Worlds: Looking Through a Scientist's Microscope.
 Tonawanda, NY: Kids Can Press, 2001.
- Nicolson, Cynthia Pratt. Earthquake! Tonawanda, NY: Kids Can Press, 2002.
- Nicolson, Cynthia Pratt. Tomado! Tonawanda, NY: Kids Can Press, 2003.
- Romanek, Trudee. Achoo! The Most Interesting Book You'll Ever Read About Germs. Tonawanda, NY: Kids Can Press, 2003.
- Silverstein, Alvin. Poisoning. New York: Scholastic, 2003.
- Swanson, Diane. *Turn It Loose: The Scientist in Absolutely Everybody.* Toronto: Annick Press, 2004.
- Zronik, John Paul. Salt. New York: Crabtree Publishing, 2004.

Recommended Science Websites

- About.com The Human Internet http://kidscience.miningco.com/ msub15.htm—Science/nature activities.
- Discovery Channel http://school.discovery.com/sciencefaircentral/— Activities and games related to science concepts.
- Disney Family Page http://family.go.com Activities, learning opportunities, parenting techniques, and more.
- The Franklin Institute Online —http://www.fi.edu/tfi/activity/— Science activities for children 5 to 12 years of age.
- NASA's Space Science Activities for Students—http://www.nasa.gov/kids.html —Space science activities for elementary students.
- National Geographic.com http://www.nationalgeographic.com/kids/ index.html—Games, activities, and articles for children.

- Science Nature for Kids—http://kidscience.about.com/cs/ theenvironment/— Science experiments, projects, and games. Interact with the experts on tough science questions.
- United States Department of Education— http://www.ed.gov:80/pubs/parents/Science/index.html—Activities to help your child learn science.
- United States Department of Education— http://www.ed.gov/pubs/parents/Science/Introduction.html—Ways to help your child learn science.
- Yahoo http://www.yahooligans.com/Science_and_Nature/—Science links for children.
- 2think.org http://www.2think.org/hycls.shtml —Activities to help your child learn science.

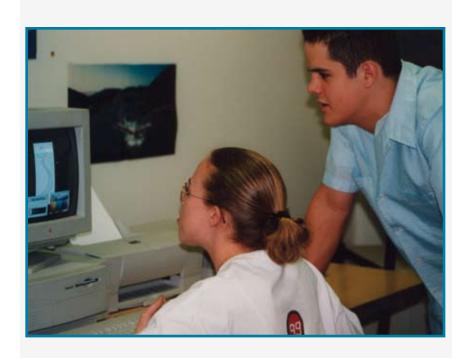
Recommended Social Studies Books

- Chaucer, Geoffrey. Canterbury Tales. Adapted by Barbara Cohen.
 New York: Lothrop, Lee, and Shepard, 1988.
- Corbishley, Mike. The Medieval World. New York: Peter Bedrick Books, 1992.
- Fisher, Leonard Everett. The Great Wall of China. New York: Macmillan Publishing Co., 1986.
- Haskett, Edythe Rance (Ed.). Some Gold, a Little Ivory: Country Tales from Ghana and the Ivory Coast. New York: John Day Co., 1971.
- Hodges, Margaret, & Evernden, Margery. Of Swords and Sorcerers.
 New York: Macmillan Publishing Groups, 1993.
- Macaulay, David. Pyramids. New York: Houghton Mifflin Co., 1975.
- Matthews, Sally S. The Sad Night: The Story of an Aztec Victory and a Spanish Loss. New York: Clarion Books, 1994.
- McGraw, Eloise Jarvis. The Golden Goblet. New York: Puffin Books, 1986.
- Nhuong, Huynh Quang. The Land I Lost. New York: Harper and Row, 1982.
- Pearson, Anne. Eyewitness: Ancient Greece. China: Dorling Kindersley Books. 1992.
- Sadler, Catherine Edwards (Reteller). Heaven's Reward: Fairy Tales from China. New York: Atheneum, 1985.
- Simon, James. Eyewitness: Ancient Rome. China: Dorling Kindersley Books, 1992.

- Snyder, Zilpha Keatley. The Egypt Game. New York: Atheneum Books, 1986.
- Walker, Barbara. A Treasury of Turkish Folktales. Hamden, CT: Shoe String Press, 1988.

Social Studies Links

- Explorations 4 Kids http://www.gomilpitas.com/homeschooling/explore/activism.htm A directory of websites for learning.
- Fun Social Studies http://www.funsocialstudies.com/ A child-friendly environment for learning social studies. Articles and links are primarily aimed at children from 7 to 12.
- National Geographic http://www.nationalgeographic.com/kids/
 Games, contests, articles, and activities.
- National Geographic Xpedition http://www.nationalgeographic.com/xpeditions/hall/index.html An interactive "museum" that takes visitors on geography journeys.
- National History Museum: London http://www.nhm.ac.uk/
 interactive/index.html Exhibits and activities, as well as research projects, features, and related sites.
- United States Department of Education http://www.kidsource.com/kidsource/content/history.html Activities to help children from 4 to 11 learn history.
- The Wagon Train http://www.siec.k12.in.us/~west/proj/lincoln/ A picture gallery, an Internet treasure hunt, and class activities.



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- Bridges to Home. Creative Publications, 1997.
- Department of Defense Education Activity (DoDEA) Content Standards for English/Reading/Language Arts. Draft for K-12. December 2001.
- Department of Defense Education Activity (DoDEA) Content Standards for Mathematics. January 2000.
- Department of Defense Education Activity (DoDEA) Content Standards for Science. 1997.
- Department of Defense Education Activity (DoDEA) Content Standards for Social Studies. Draft as of March 2000.
- Discovery Works. Houghton Mifflin Science, 2000.
- Helping Your Child Learn Science. Nancy Paulu and Margery Martin.
 U.S. Department of Education, June 1991.
- Math Thematics Middle Grades, Book 1. McDougal Littell, 1999.
- Mega Skills, How Families Can Help Children Succeed in School and Beyond.
 Dorothy Rich. Houghton Mifflin Company, 1988.
- My World. McGraw-Hill School Division, 2001.
- Parents on Your Side. Lee Canter and Marlene Canter. Lee Canter and Associates, 1991.
- Performance Standards, Volume I, Elementary School. Learning Research and Development Center of the University of Pittsburgh and the National Center on Education and the Economy, 1998.
- Promoting Your School. CarolynWarner. Corwin Press, 1994.
- Science at Home. Curriculum Associates, Inc., 1997.
- Spotlight on Standards in the Classroom. Red Clay Consolidated School District. Office of Standards and Curriculum, 1999.
- Welcome to Literacy Place, Grade 6. Scholastic Inc., 1996.
- Working Parents Can Raise Smart Kids. John E. Beaulieu and Alex Granzin. Parkland Press, 1999.
- Yardsticks, Children in the Classroom Ages 4–12. ChipWood. Northeast Foundation for Children, 1996.

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WebSites

- "Continuing on Track... As Your Child Grows and Learns." Child Trends. http://www.childtrends.org, accessed 10 August 2001.
- "Helping Your Child Learn Science Activities at Home." 2think. org. http://www.2think.org/home.shtml, accessed 8 August 2001.
- "Helping Your Child Succeed in School." Dorothy Rich. Kid Source Online. http://www.kidsource.com/kidsource/pages/Education. html, accessed 8 August 2001.
- "How Parents and Families Can Help Their Children Do Better in School." Kid Source Online. http://www.kidsource.com, accessed 8 August 2001.
- "How to Get Ready for a New School Year." Jeanne Allen. Center For Education Reform. http://www.edreform.com/pubs/parent.htm, accessed 6 Aug. 2001.



Isabel Castillo Paper Mosaic, "Starry Night"

